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ABSTRACT

Presented is the user's manual for the Educational Manpower Information Sources Project (EMAP), an information file containing approximately 325 document abstracts related to the field of educational planning. (The EMAP file is described in document SP 006 747.) (JB)

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EMAP USERS MANUAL

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EDUCATIONAL MANPOWER INFORMATION SOURCES PROJECT
Prepared Under Contract by the
National Planning Association
for the

BUREAU OF EDUCATIONAL PERSONNEL DEVELOPMENT
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Washington, D.C., December, 1971

SP 006 748

A system that can be maintained or updated with the minimum cost and effort and allows the users to enjoy the advantages of modern information systems.

The manual system contains much that would be applicable and transferrable to a modern responsive information system. However, for the reasons stated above, the manual system should be considered for interim use only, to be replaced as soon as possible by one of the systems set forth in the "three alternatives," a paper separately prepared and delivered to USOE.

This study was conducted under the overall supervision of Dr. Leonard A. Lecht, Director of the Center for Priority Analysis. Marc Matland, Deputy Director of the Center, provided many valuable insights during the preparation of the final report.

The authors wish to thank Mrs. Iris Garfield and Mr. Bill Smith and others in USOE whose cooperation and thoughtful comments facilitated the conduct of this study.

Arnold Kotz
Principal Investigator

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I. Foreword

Foreword

EMAP Users Manual

The EMAP Users Manual describes a preliminary information classification system focusing on quantitative educational personnel descriptions, developed as a product of the first phase of the Educational Manpower Project being conducted by the National Planning Association (NPA) for the U. S. Office of Education. A major objective of this system is to provide staff members of USOE with a catalog of data and studies available for use in policy planning, decision making, program monitoring and other activities necessary to the provision of services for the improvement of educational personnel throughout the United States.

Many new demands and programs are being placed upon the educational establishment by Congress, local legislators and the public. Programs such as those for raising the level of performance of the disadvantaged, for racial balance, for the handicapped, for the preschool child, for drug control, and for the environment, all require responsive actions by school leadership, teachers and support personnel. Additional burdens are thrown upon school personnel in an environment in which budgets are limited and accelerated change in multiple fields of human endeavor affect the children's value systems, their discipline, their motivation, and their work performance. In this environment, USOE required sharp focus upon information sources concerning the education professions that would display relevant data and researches completed on educational personnel. The latter represent a major and highly important component of the input resources into the educational process which is most important in determining the manner in which all educational resources and institutions respond to the needs of target populations.

The structural make-up of the educational system in the United States complicates the problem of information collection and analysis. As of 1971, there were over 17,000 school districts throughout the country in fifty U.S. states and their counties and a total public and nonpublic kindergarten, elementary and secondary enrollment of 51,000,000.1/ There has been a tremendous outpouring of information on all phases of education. In the United States alone, there are 50,000 documents and 14,000 journal articles covering researches and reports of all types released annually.2/

1/ U.S. Department of Commerce, National Bureau of Standards, U.S. Metric Study, July, 1971, Appendix IV, p. 111.

2/ Burchinal, Lee G., "ERIC, the National Education Documentation Retrieval System of the United States", Bulletin No. 178 of the International Bureau of Education, UNESCO, Paris, 1971.

Charting logical pathways through this mountain of educational material is therefore a prime objective of EMAP if potential users are to be aided in keeping current with significant studies containing pertinent quantitative information on educational personnel. Such materials should help them answer such questions as: What are the major issues in the educational professions today? Who are the educational personnel? What motivates individuals to serve as educational personnel? Who trains them? Where? How? How many? Are there any guidelines used to ensure that the right individuals/numbers are being trained? For what educational areas/skills/responsbilities? Who does their hiring? When they are hired, do they undergo any training? Who assigns them? How? How could they best be assigned? When assigned, do they perform their assigned functions efficiently? Who ensures this objective? What types of factors affect their performance? Who rates them on their performance? How? If they are not performing, what types of training should be given to them? What factors cause teachers to leave education? If they leave education,where do they go? What factors make them return?

These are but a few of the myriad of questions that face the managers of personnel development programs if they are to provide services which are geared to the needs of educational manpower all over the country. The selection of initial areas of search for the identification of data and data studies was geared to expressed management needs of personnel of the Bureau of Educational Personnel Development in the U.S. Office of Education in terms of important issues and high priority areas of concern. In addition, a review of Congressional hearings and of current literature suggested high priority concerns. Major Federal, state and local programs, planned educational personnel development programs and their data needs suggested other issues. From this analysis, thirty major categories were selected as most significant for the education personnel information sources classification system.

Areas such as early childhood education, teacher negotiations and unions, training, education of the disadvantaged, use of paraprofessionals in education, civil rights and school staff racial balance, personnel career patterns, innovation and experimentation, educational leadership, public and teacher attitudes towards education are some examples of concerns expressed by the OE program managers as vital to design and planning of responsive programs. A list of the 30 categories appears on p. 7. The search for relevant materials was further guided by the distinction between qualitative and quantitative characteristics of the reports with priority of choice given to researches and studies that present analyses backed by substantial research findings. Evaluation reports for example, that contain statements,"the early childhood education program raised the participant's reading level by an overall improvement of 25% in their Iowa Reading Test Scores and was judged as successful by 95% of the principals and teachers in whose schools the program was introduced," would be preferably chosen over reports that merely state, "the early childhood education program was judged as successful by the participants," or such similar qualitative authors' opinions. This focus on relevant studies containing quantitative information and research data was expressed as a prime need of USOE. However,

some studies with no relevant research statistics were included provided these show trends, discuss timely issues, or serve as valuable secondary sources of educational research data. At this point, it should be noted that EMAP is the first cut at an endeavor showing how salient information studies on educational manpower could be identified and pinpointed as potential sources of program trend information.

The description that follows sets forth a manual system resulting from a first cut feasibility study to determine the value of establishing an educational personnel information sources system on a manual basis. Another task required suggesting alternative ways for maintaining and updating the system, including the feasibility of computerizing the information system. The tremendous volume of documents and journal articles both existing on educational manpower and forthcoming annually, made it apparent that a manual system would not be adequate to meet the needs of the U.S. Office of Education. NPA's findings, elsewhere reported, and called to USOE's attention, leads to the firm conclusion that the existing magnitude and annual volume of data requires the development of a computerized system of data collection facilitating the efficient retrieval and storage of educational manpower statistics needed by the U.S. Office of Education for planning and programming purposes.

An automatic data processing system for storage and retrieval will best accomplish the objectives of EMAP which are to achieve:

> A system that is specially geared to guide the users in searching significant data sources which will be helpful in decision making and the planning, programming and administering of educational personnel development programs.
>
> A system that will identify data availabilities, current and prospective, and will facilitate analysis and display of the data and which will permit a reliable gauge of the directions, quality and significance of past, on-going and future studies of educational manpower in relation to needs.
>
> Development of techniques that allow its users to search existing systems and cull material for the charting of new avenues for research and coordination of manpower research efforts throughout the country.
>
> A system that draws upon the best features of established systems (such as those of NCES, Belmont, ERIC) and tailors these to the needs of the users without being constrained by standard, established or conventional library or information systems or practices, and by building upon them rather than duplicating them.

A system that can be maintained or updated with the minimum cost and effort and allows the users to enjoy the advantages of modern information systems.

The manual system contains much that would be applicable and transferrable to a modern responsive information system. However, for the reasons stated above, the manual system should be considered for interim use only, to be replaced as soon as possible by one of the systems set forth in the "three alternatives," a paper separately prepared and delivered to USOE.

Arnold Kotz

Arnold Kotz
Principal Investigator

II. The Contents of EMAP

Criteria for Selection of EMAP Entries

EMAP presents abstracts of educational studies and materials containing quantitative information pertaining to the period 1962 to the present. It should again be stressed that at this stage, abstracts and not the original documents or a data bank based upon them are available through the system. All included materials cover the following educational personnel groups: Administrative; Instructional Staff; Pupil Personnel Services and Other Personnel. Specifically these would be:

Administrative

- School Administrators
  - Superintendents
  - Principals
  - Other
    - Department Heads
    - Educational Planners

Instructional Staff

- Teachers (all types)
- Paraprofessionals
- Other

Pupil Personnel Services

- Guidance Personnel or Counselors
- Health Personnel or Workers
- Social Work Personnel
- School Psychological Personnel
- Speech and Hearing Specialists
- Speech Pathology Personnel

Other Personnel

- Supervisors
- Curriculum Designers
- New Professionals
- Teacher Trainers
- Educational Specialists
- Consultants
- Media Specialists
- Paraprofessionals
- Educational Personnel
- Nonteaching Professionals
- Professional Personnel
- Education Students

The inclusion of the groups under each main type of staff is open to discussions, for instance, classifying paraporfessionals under instructional staff when they also may perform non-instructional support duties in the classroom. Paraprofessionals are therefore also shown under other personnel. Some general terms lacking precision, such as, "Educational Personnel" and "Professional Persons" were used to reflect descriptors used in the current literature.

The initial design and development of EMAP are concerned with educational personnel in nursery, kindergarten, elementary and secondary public and private schools in the United States. Aside from criteria which limit the initial choice of material by (1) focus on educational personnel, (2) recency, and (3) presence of quantitative information, an additional criterion was used, namely, (4) innovative approaches allowing for the inclusion of materials through EMAP that show solutions to problems or chart future priority areas of concern in educational manpower (see Appendix I). This focus on educational personnel is maintained with a clear understanding that the ultimate purposes and end products must be the performance of the pupils who are the target populations of the educational process.

There are an initial 30 priority areas of concern in EMAP, called CATEGORY AREAS. The Category Area titles are designed to show the educational personnel group itself (ex., CA 020, Pupil Personnel Services); a standard practice or current issue in personnel development (ex., CA 006, Performance); and an educational program area showing educational personnel development activities (ex., CA 016, Early Childhood Education). The categories were selected to be responsive to management needs of the U.S. Office of Education and are not necessarily mutually exclusive.

A list of the Category Areas follows with their assigned three-digit accession numbers, 001 through n. Thus the second abstract in the third category area, supply and demand, would have CA 003 002 as its accession number. Scope notes (SN) are provided to delineate each Category Area.

EMAP CATEGORY AREAS

CA 001 Recruitment

CA 002 Selection

CA 003 Supply and Demand

CA 004 Accreditation/Certification

CA 005 Utilization/Staffing

CA 006 Performance

CA 007 Training, Preservice

CA 008 Training, Inservice

CA 009 Working Conditions, Earnings, Incentives, Fringe Benefits

CA 010 Career Patterns

CA 011 Support Professional Roles

CA 012 Civil Rights

CA 013 Education of the Disadvantaged

CA 014 Vocational Education

CA 015 Bilingual Education

CA 016 Early Childhood Education

CA 017 Educational Leadership

CA 018 Paraprofessionals

CA 019 Instructional Areas

CA 020 Pupil Personnel Services

CA 021 Special Education

CA 022 Public and Teacher Attitudes Towards Education

CA 023 Teacher Associations/Unions

CA 024 Legislation

CA 025 Teacher Characteristics

CA 026 Educational Technology

CA 027 Future Societal Needs/Trends/Plans

CA 028 Major Discipline Issues

CA 029 Community Relations

EMAP Category Areas and Their Scope Notes

CA 001 Recruitment

SN Trends and practices in the efforts of school systems to make available job opening information to individuals through educational institutions, training sources, and other pertinent channels, to encourage the best qualified of these individuals to enter the school systems.

CA 002 Selection

SN Standards and practices involved in educational personnel hiring; types of criteria set by school personnel administrators in the selection of teachers and other educational personnel.

CA 003 Supply and Demand

SN Indicators of personnel availability for employment (number currently employed and number available for future employment) and indicators of the number needed to fill job openings arising from normal employment growth and replacement needs (retirement, death, etc.).

CA 004 Accreditation/Certification

Accreditation
SN The type of recognition (e.g. professional, regional, or state) held by an educational institution (e.g. a public school system, a secondary school, etc.) granting credits earned by staff members for certification purposes.

Certification
SN The general process by which the state (or an agency or organization authorized by the state) provides a credential (certificate or license) to an individual authorizing him to perform services for the educational system.

CA 005 Utilization/Differentiated Staffing

Utilization
SN Strategies in the assignment of teacher resources and other personnel with the objective of achieving the most efficient performance for the best pupil learning outcomes.

Differentiated Staffing
SN A division and extension of the role of the teacher through the creation of a hierarchy with job responsibilities that are commensurate with the range of pay. Its principal objective is to place superior teaching talent at the disposal of more students and to offer superior teachers full professional careers as classroom teachers.

CA 006 Performance

SN Measurement of educational personnel accountability in the achievement of final educational objectives and outputs such as teacher impact on pupil learning or pupil personnel staff contribution to the improvement of instruction, or contribution of vocational education to pupil placement in jobs or related jobs for which trained.

CA 007 Training, Preservice

SN Includes systematized activities promoted, directed or approved by a school system or school that contribute to the professional or occupational growth and competence of educational personnel prior to their time of service in the school system or school. Among these activities are: workshops, institutes, conferences, lectures, demonstrations, staff meetings, school visits, courses for college credit, sabbatical and travel leaves.

CA 008 Training, Inservice

SN Includes systematized activities promoted, directed or approved by a school system or school that contribute to the professional or occupational growth and competence of educational personnel prior to their time of service in the school system or school. Among these activities are: workshops, institutes, conferences, lectures, demonstrations, staff meetings, school visits, courses for college credit, sabbatical and travel leaves.

CA 009 Working Conditions, Earnings, Incentives, Fringe Benefits

SN Includes regular personnel salaries, salary schedules and other remunerative allowances; may include types of income from sources other than educational employment of the personnel groups concerned, also trends and practices of school systems for recognizing and compensating school personnel meritous performance; includes provisions for the encouragement of personnel seeking and engaging in professional growth.

CA 010 Career Patterns

SN Descriptions of personnel employment profiles and standard procedures involved in the administration of personnel such as tenure, turnover, mobility, termination and dismissal.

CA 011 Support Professional Roles

SN Includes staff members providing services supporting instruction such as supervisors, educational specialists, and media specialists.

CA 012 Civil Rights

SN Activities involved in the achievement of racial balance and integration of the school system; the safeguarding of constitutional rights of educational personnel, particularly focusing upon issues such as the professional status of minority teachers and racial profiles of school personnel.

CA 013 Education of the Disadvantaged

SN Staff members in programs providing services to individuals identified as suffering from economic, intellectual, cultural and social handicaps, i.e., as members of families receiving incomes below poverty levels, minority groups, low intelligence, etc.

CA 014 Vocational Education

SN Occupational skill training, i.e., the educational content and process through which one learns to become a competent worker; includes educational personnel in vocational education program offerings such as agriculture, office occupations, trade and industrial occupations, technical occupations, gainful home economics and health and distributive occupations.

CA 015 Bilingual Education

SN Personnel in programs geared to the provision of instructional services that bridge cultural and language gaps between minority groups and the larger society, i.e., the personnel skilled in bilingual education methods such as using minority groups' languages as well as the regular medium of instruction within the school program.

CA 016 Early Childhood Education

SN Staff members in charge of educational experiences provided by the school at the preprimary and primary levels, i.e., training, types of personnel needed for innovative services and programs.

CA 017 Educational Leadership

SN Personnel groups charged with responsibilities of administrative and evaluative services within the school system and the creation of healthy climates of change within the system. Includes school superintendents and principals.

CA 018 Paraprofessionals

SN Staff members performing assigned activities of a teaching or nonteaching nature which are not classified as fully professional duties but which assist a staff member to perform professional educational teaching or other professional educational assignments.

CA 019 Instructional Areas

SN Includes new instructional fields of priority interest in such areas as environmental health instruction and new career programs; also includes the fields of instruction in regular academic programs, such as mathematics and the social and life sciences.

CA 020 Pupil Personnel Services

SN Educational personnel charged with the provision of services such as guidance services, health services, school psychological services, audiology services, speech pathology, and school social work services which are concerned with the total welfare of pupils. Some of these personnel groups are: guidance counselors, speech and hearing specialists, school psychologists, social workers and health workers.

CA 021 Special Education

SN The provision of services which are different from or in addition to those provided in the usual school program and are provided for exceptional pupils by specially qualified personnel. Exceptional children are identified as such on the basis of (a) physical handicap, (b) emotional and/or social handicap, and (c) measurable exceptionality in some mental ability, i.e., mentally gifted and mentally retarded. Some exceptional children may have more than one type of exceptionality. Special education may be provided in special classes on a full-time or part-time basis, outside the school plant or in other appropriate settings.

CA 022 Public and Teacher Attitudes Towards Education

SN Opinion levels of the public and teaching personnel regarding the entire range of education, its policies, standards, practices, programs and personnel.

CA 023 Teacher Associations/Unions

SN Formal groups organized expressly by teaching personnel for the improvement of education and their employment conditions. Includes analyses of working conditions, professional status of teachers, other relevant issues in teacher union-school board negotiations.

CA 024 Legislation

SN Laws and regulations passed by Federal, state and local legislature and boards affecting educational personnel development and employment.

CA 025 Teacher Characteristics

SN Personnel descriptions useful for administration and evaluation purposes such as educational preparation, experience, certification status, type of assignment, teaching load, marital status, age and sex.

CA 026 Educational Technology

SN Impact of new technological developments on education; personnel specializing in providing services using these technologies in the classroom such as television teachers and those skilled in computer-assisted instruction.

CA 027 Future Societal Needs/Trends

SN Includes planning and research with respect to future developments in education affecting educational personnel such as future plans and priorities of education in the 1980's or the year 2000, the new programs/approaches of education and the types of personnel, facilities and equipment needed to implement these plans.

CA 028 Major Discipline Issues

SN Assessment of the types of disciplinary practices and classroom control; the role of administrators in maintaining discipline; problems and methods in the maintenance of effective discipline.

CA 029 Community Relations

SN Interpersonal relations between educational personnel groups and the community; identification of more effective channels of communication and cooperation for the improvement of the educational system; community control.

CA 030 Innovation/Experimentation

SN Educational innovations and experiments are collected and described in the abstracts gathered together under this category, with particular note being made of the role of educational personnel related thereto. Also concerned with the dissemination of results and the introduction of change into educational systems and processes.

III. Instructions to EMAP

EMAP in its initial form has been designed as a manual system. It provides three indexes to guide the user into the system, i.e., subject, author/institution, and title, the last two in card file form. Its abstracts also in card form, are numerically filed by Category Area and are available for browsing in folders. This latter feature permits ready access to summaries of operating and research reports grouped by areas of major program interest.

EMAP's Browsing Feature

This feature is presented as a short-cut or time saving device for the user as a first step into EMAP.

Instructions:

1. Proceed to the abstract file and check the Category Area File Tabs. Determine the area of your interest and pull out all the abstracts filed under that area. See instructions for reading the abstracts and codes, p.14 - 20.

2. For searching other material that may contain relevant information but that has been assigned to other areas as its major focus, check the coordinated Subject Index. For using this index, see instructions, p.21.

The EMAP Accession Number

All EMAP abstracts carry two sets of accession numbers. As each material or educational report meets the set criteria for inclusion in EMAP, it is assigned a sequential number indicating its order of inclusion in EMAP, and a six-digit category area number: The first three digits for indicating category area and the last three digits for the sequential order of their inclusion into the category area. See Figure 1.

Figure 1. The EMAP Accession Number

Sequential Number	Category Area Number		
100	CA	021	057
↓	↓	↓	↓
100th abstract in EMAP	Category Area	Special Education	57th abstract in the category area "Special Education"

The EMAP Abstract

All materials included in EMAP appear on individual abstracts. Each abstract or resumé offers the following information:

An accession number showing the classification of the material by its sequential order of inclusion into EMAP and by its type of focus upon educational personnel by major category area.

A statistical format which presents the types of quantitative information available on the educational personnel group under focus.

A brief summary of the report's objectives, scope, methodology, and significant highlights.

An evaluation of the material's scope, methodology, significance, and recency.

A section identifying the material and indicating where a copy of the document may be obtained.

(See following attached form and instructions for reading the abstract codes, page 18.)

NPA: 11/71

EMAP ABSTRACTS

Educational Personnel Statistics

(1) Group	(2) Subject	(3) Ed. Level	(4) Type of Data	(5) Area	(6) Time Period	(7) Table	(8) Page
T	Employment requirements, annual openings	Elem, Sec	Proj	N	1968-80		35

Summary

This report, by providing projections of occupational requirements and supply and showing how planning strategies and implications could be drawn from the proferred information, is specifically geared to the needs of educational planners. An entire section discusses occupational data needs in the planning of education and training and how market shortages could be alleviated by enlightened policies and decisions based on an early assessment of future labor market needs. The need for projections in educational planning is reiterated by showing the less than perfect adjustments occurring in the labor market and its relative lack of response to changes, particularly in occupations that require extended training. Four key elements needed to evaluate training needs are included: (1) projections of the number of workers required in each occupation, (2) estimates of needs to replace workers

Accession

Title: Occupational Manpower Training Needs

Author/Institution: Bureau of Labor Statistics, DOL
Publisher: Government Printing Office
Sponsoring Agency:
Place: Washington, D.C.

Date: 1971
Volume/No.:
No. Page:

Form: Hard Copy
Type of Report: Bulletin
Where Available: Bureau of Labor Statistics' Bulletin # 1701

Educational Personnel Statistics (Continuation)

(1) Group	(2) Subject	(3) Ed. Level	(4) Data Type of [illegible]	(5) Area	(6) Time Period	(7) Table	(8) Page

Summary (Continuation)

who die, retire, and where data allow, who transfer to other occupations; (3) data on output from various training programs, and (4) information on ways workers prepare for occupations (see p. 3). The basic assumptions underlying these key elements to planning are also discussed showing relationships between prevailing or anticipated conditions upon market demand, i.e. the assumed level of housing having an impact upon the demand for construction craftsmen. Illustrative samples showing how implications for training could be drawn from the data analysis are provided (see pp. 5-7). The report then presents job information for a variety of occupations. The section on elementary and secondary teachers includes a preliminary assessment of teacher certification and projected employ-

Evaluation

This is a much needed report in the area of fitting educational personnel projections into the scheme of educational planning. The projections, however, are general estimates with no finer breakdowns of the overall totals. To overcome this shortcoming, the user could use the general framework of analysis and key elements supplied by this report to determine need levels in smaller geographic areas or within specific program or instructional areas.

In essence, the material is more valuable as a reference material for a school counselor than as a basic data tool for the projection of educational personnel. In addition, the report does not show the methods, models, data and underlying assumptions for the projection.

Educational Personnel Statistics (Continuation)

(1) Group	(2) Subject	(3) Ed. Level	(4) Data Type of [illegible]	(5) Area	(6) Time Period	(7) Table	(8) Page

Summary (Continuation)

ment needs throughout the 1968-1980 period. Based on current trends, 2.7 million new teacher education graduates may be expected to enter teaching in this period, and 1.4 million are expected to re-enter. These supply estimates would exceed the projected annual need of 99,000 teachers in elementary levels and 101,000 teachers in secondary levels, or an annual total need of 200,000.

Evaluation

The EMAP Abstract Card Codes

Codes for each type of personnel group and its accompanying statistical information were developed for the statistical format on the EMAP Category Area Entry Form, for considerations of space, brevity, and abstracting speed. Where possible the most popularly used abbreviations were chosen to designate included terms or in most cases, the first one of two letters of the terms were used. The codes are presented consecutively by each column of the format. See Figure 2.

Figure 2.

EMAP Category Entry Form
Statistical Format

Educational Personnel Statistics

(1) Group	(2) Subject	(3) Ed. Level	(4) Type of Data	(5) Area	(6) Time Period	(7) Table	(8) Page

Column 1 "Group" - The educational personnel group referred to in the abstracted report

Column 2 "Subject" - A short description or a further clarification of the statistics available for the above group

Column 3 "Educational level" - A classification of the statistics by education level such as nursery, kindergarten, elementary, or secondary

Column 4 "Type of Data" - Characteristics of the statistics in terms of the form of presentation, i.e., whether these be actual frequency counts from a population or a sample survey, or porportions, percentages or ratios

Column 5 "Area" - Type of geographic coverage, whether these be national, state or local statistics

Column 6 "Time Period" - The date of the data collection

Column 7 "Table" - Numbers of the tables in the report containing the statistics

Column 8 "Page" - Pages in the report containing the statistics

Table 1. Codes for the SAIP Entry Form

Column	Term	Code	Term	Code
Column 1	Students	Stud	Educational Personnel	Ed P
	Consultant	Consult	Guidance Counselors	Guid C
"Group"	Teachers (all types)	T	School Psychologist	S Psy
	Administrators	Ad	Speech Pathologist	S Path
	Superintendents	Supt	Speech and Hearing Specialist	SH S
	Principals	Prin	Social Workers	SW
	Assistant Principals	Asst Prin	Health Workers	HW
	Curriculum Designers	Curr Des	Pupil Personnel Services (Workers)	Pup P
	Supervisors	Sup	Professional Personnel	Prof P
	Teacher Trainers	TT	Non-Teaching Professionals	Non-T Prof
	Educational Specialists	Ed S	Instructional Staff	Instr Staff
	Media Specialist	Me S	Education Students	Educ Stud
	Librarian	Lib	Department Heads	Dept H
	Paraprofessionals	Par		
	Teacher Aides	Tar		
	Volunteers	Vol		
Column 2	No codes; some standard abbreviations may be used			
"Subject"				
Column 3	All levels	-	Secondary	Sec
	Preschool	Pre S	Junior	Jr
"Educational Level"	Nursery	Nur	Senior	Sr
	Kindergarten	Kin	Elementary	Elem
Column 4	Standard Deviation	S D	Actual Count	Ct
	Rank	Rank	Item Listing	As is
"Type of Data"	Correlation	Corr	Estimate	Est
	Range	R	Index	Ind
	Frequency	Freq	Ratio	Rto
	Quartile	Qrt	Numbers	N
	Projection	Proj	Median	Mdn
	Sample	Smp	Mean	Mn
	Percentage	%	Level of Significance	level of Sig
	Average	Av	Analysis of Variance	Anova
	Factor Analysis	F A	Descriptive Data	Descrip
	Regression Analysis	Regr A		
Column 5	National	N	Minnesota	Minn
	Regional	R	Mississippi	Miss
	State	S	Missouri	Mo
"Area"	Local	L	Montana	Mont
	Local System	L Sys	Nebraska	Nebr

Column	Term	Code	Term	Code
U S Census Bureau Standard Abbreviations with some exceptions	Local School	L Sch	Nevada	Nev
	Alabama	Ala	New Hampshire	N H
	Alaska	Alas	New Jersey	N J
	Arizona	Ariz	New Mexico	N M
	Arkansas	Ark	New York	N Y
	California	Ca	North Carolina	N C
	Colorado	Colo	North Dakota	N D
	Connecticut	Conn	Ohio	Oh
	Delaware	Del	Oklahoma	Okl
	Florida	Fla	Oregon	Ore
	Georgia	Ga	Pennsylvania	Pa
	Hawaii	Ha	Rhode Island	R I
	Idaho	Id	South Carolina	S C
	Illinois	Ill	South Dakota	S D
	Indiana	Ind	Texas	Texas
	Iowa	Iowa	Tennessee	Tenn
	Kansas	Kans	Utah	Uh
	Kentucky	Ky	Vermont	Vt
	Louisiana	La	Virginia	Va
	Maine	Me	Washington	Wash
	Maryland	Md	West Virginia	W Va
	Massachusetts	Mass	Wisconsin	Wis
	Michigan	Mich	Wyoming	Wyo
Column 7 "Table"	Appendix	App	Chart	Cht
	Figure	Fig		

The EMAP Indexing System

The EMAP Subject Index

The EMAP index was designed to provide as much information as possible on each abstract included and to allow cross-indexing between the category areas and educational personnel groups. The index in its present form is a catalog of all included materials and studies showing each entry by seven to eight descriptors. See Appendix 3.

The choice between a card file subject index or a catalog format was decided in favor of the latter since it yields the following advantages:

- —serves as a master list of all catalog materials and yields a running count of the total current number of materials within the file
- —shows all studies by type of educational personnel
- —shows all studies classified by category areas, subcategories, and additional key words (for further discussion see p. 26)
- —shows all studies by type of geographic coverage, i.e., national, state and local
- —shows all studies by educational level
- —shows studies by program and instructional area
- —shows the type of each of the studies, i.e., evaluation, survey, guide
- —shows the date of the data within each of the studies
- —allows the user to browse through the index and combine several descriptors and narrow down the choice of materials related to his search. For example, by checking across a page of the index, the user can select all national surveys on teachers of the disadvantaged containing data not earlier than 1967.

EMAP Subject Index Summary

Recognizing that the above-mentioned type of search may be tedious since the user may have to check the whole index log, a summary of the cross-indexing by type of personnel crossed against the category areas and key words is provided. This summary appears together with the Coordinated Subject Index and classifies on the right side, all abstracts showing data by type of personnel group in alphabetical order -- teachers, administrators, supervisors, paraprofessionals, etc. On the left side, abstracts are classified by category area in numerical order. For purposes of clarification, the abstract numbers listed on the left side of the index are further classified by major focus studies, minor focus studies, and studies with other relevant information. To exemplify this classification system with regard to recruitment, major focus studies would zero in on recruitment, minor focus studies would contain substantial information on recruitment, although they would focus primarily on other subject, i.e., selection with related information on recruitment techniques. Only accession numbers appear in this summary. Numbers that match across both sides of the index summary contain information on both the personnel group and the category area classification. See Appendix 2.

Sample Searches

Search A - Guidance Counselor Preparation and Training

1. Check guidance counselors under Guid C on the left side of the Subject Index Summary.

2. Check Training, preservice, and Training, inservice on the right side of the Summary.

3. Note the numbers common to both sides of the Subject Index Summary under each of the above terms. Numbers that are common to both sides of the index will always be relevant to the particular search. Numbers that appear only on one side or another may or may not be relevant.

4. Use these numbers to find the materials in the abstract file.

Search B - Training of Guidance Counselors, national studies only, data not earlier than 1967

1. Use the sequential number of the accession numbers noted down in Search A to check the descriptors of these materials on the Coordinated Subject Index. Scan the "geographic area" and the "date of data" columns.

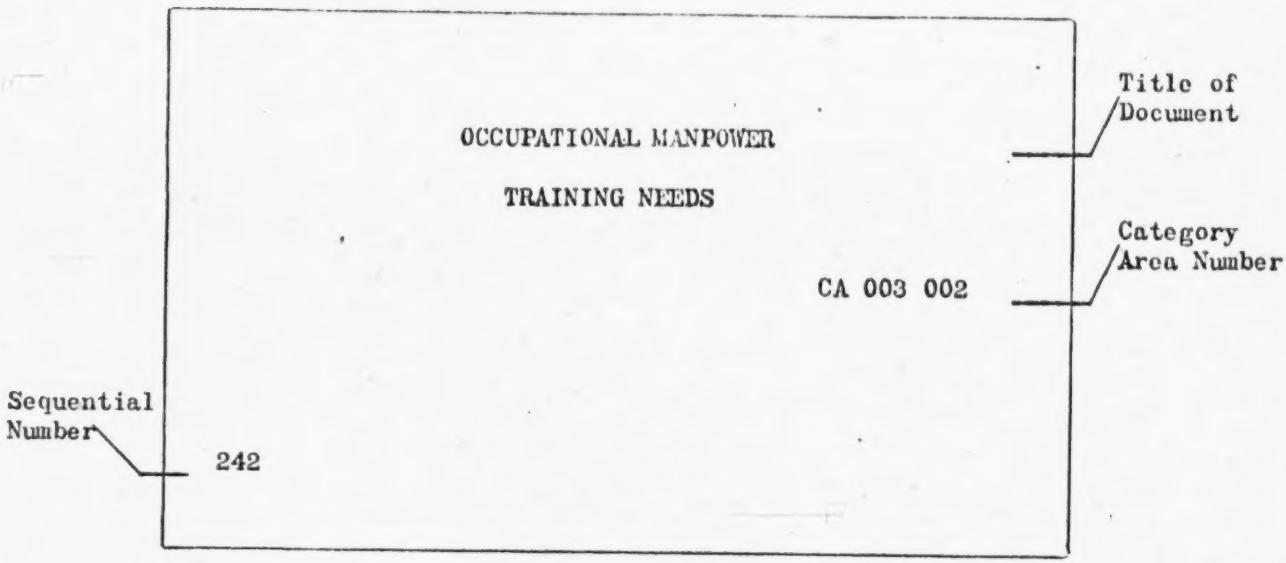
2. Eliminate the accession numbers of materials that do not answer the criteria of Search B.

3. Proceed to the Abstract File and use the remaining accession numbers to find the desired abstracts.

The EMAP Title Index

Figure 3

Sample Title Index Entry



Rules for the Title Index

1. Titles beginning with articles such as "The", "A", "An" are filed alphabetically according to the first major word in the title immediately following the article

   "The Performance Contract in Gary" is filed under P for "Performance"

   "A Study of Head Start" is filed under S for "Study"

2. Articles within titles are considered in alphabetization

   "A Study in Child Care" precedes "A Study of Head Start"

3. Prepositions are assigned equal weight in alphabetization

   "To meet the Challenge of the Handicapped Child" would be filed under T

4. Titles beginning with numbers unless these are specifically spelled out are filed alphabetically according to the first word immediately following the number

   "1968-1969 Annual Report" would be filed under A for "Annual"

   "One hundred and twenty-eighth Annual Report" would be filed under O for "One"

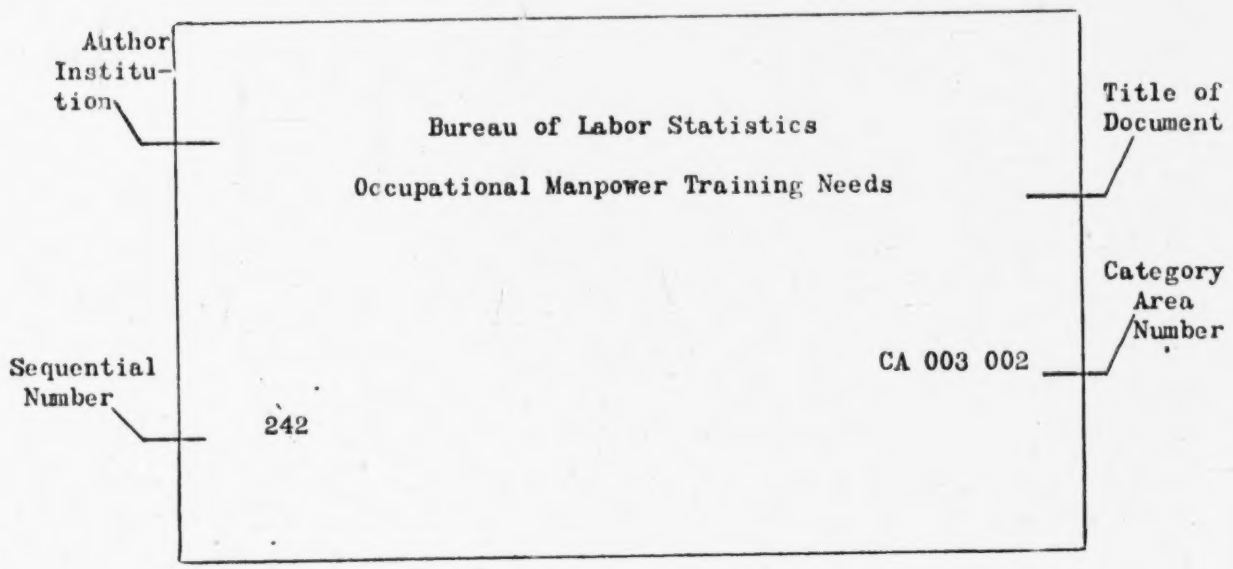
5. Organizational titles such as AFT, NEA or other similar abbreviations and anagrams are filed alphabetically as spelled-out titles

   "AFT QuEST for Differentiated Staffing" would be filed under A, with succeeding letters in the title "American Federation of Teachers" used accordingly in the alphabetization.

The Author/Institution Index

Figure 4

Sample Author/Institution Index Entry



Rules for the Index

1. Materials are filed by author's surname and subsequently by his first and second names if needed.

2. Institutional Titles beginning with articles such as "The" are filed alphabetically according to the first major word in the title immediately following the article.

   "The National Association of Secondary School Principals" would be filed under N for "National".

3. Agencies considered part of larger organizations are filed by their title and secondarily, by the larger organization.

   "ERS Reporter, American Association of School Administration" would be filed under E for ERS and subsequently by the other letters in the agency name.

4. Authors connected with organizations, colleges and universities are indexed according to their names followed by their university or association.

5. State department or annual reports attributing authorship to superintendents are filed under the name of the state department.

6. To deal with variations in organizational title such as New York State University or University of the State of New York, all material carrying this authorship would be indexed under "State University of New York" or under S.

7. Agencies under the Office of Education are filed under OE and alphabetized by bureau or agency except NCES which is filed under N.

8. Documents from the Senate and House of Representatives, mostly committee reports, are filed under "U.S. Congress" and alphabetized by Committee title.

EMAP Categories, Subcategories and Keywords

The choice of standard, useful index entries for the EMAP Coordinated Subject Index Log (see Column "category, subcategory, key word" Appendix 2) involved considerations. For instance, problems in the standardization of educational terminology have still to be resolved at the current time as can be noted in the increasing number of materials developed in this area. Various groups have attempted to achieve both uniformity in educational terminology and indexing utility; however, the need still exists for an inclusive, up-to-date source on standard educational manpower terminology in line with EMAP's objectives. In this respect, EMAP draws from available sources such as OE handbooks of educational terminology, other major information indexing systems, the growing body of general manpower terminologies and educational literature to help delineate the scope of the category areas and afford the user a sharper focus on EMAP information.

To derive a hierarchical classification and description of the material contents appearing on each abstract entry for inclusion into EMAP, each material is indexed by category area and by sub-categories in the subject column of the EMAP Coordinated Index Log.

Efforts were exerted to achieve brevity and uniformity in describing the contents of the selected reports and studies by using the following developed list which was accordingly expanded when new material undergoing indexing could not be described by the existing categories or subcategories.

.CA 001 Recruitment

- Trends
- Practices
- Standards
- Sources
- Policies

CA 002 Selection

- Trends
- Standards
- Practices
- Policies

CA 003 Supply and Demand

- Components (elements of supply and demand, i.e., new teachers, number needed for replacement and new hires)
  - By geographic area (national, regional, etc.)
  - By instructional field (mathematics, vocational education)
  - By type of personnel (teachers, pupil personnel staff)
  - By educational level (elementary, secondary, etc.)

CA 004 Accreditation/Certification

Standards/requirements
Status
Eligibility
Personnel classification
Trends

CA 005 Utilization/Differentiated Staffing

Trends
Practices
Staffing model programs
Impact
Status

CA 006 Performance

By type of educational personnel
By educational level/program area
Trends in measurements
Model programs
Student performance
Educational outcomes

CA 007 Training, Preservice

By type of personnel
New programs/innovations
By type of skill/proficiency
Costs
Issues
Methods
Needs
Instructional area

CA 008 Training, Inservice

By type of personnel
New programs/innovations
By type of instructional area
By type of skill/proficiency
Costs
Issues
Methods
Needs

CA 009 Earnings

By instructional area
By geographic area
By type of personnel
Salary schedules
Salary levels
Merit pay
Earnings from other employment

CA 010 Career Patterns

Mobility
Tenure
Turnover
Promotion
Other components

CA 011 Support Professional Roles

Supervisors
Curriculum designers
Media specialists
    Training
    Roles/new responsibilities
New professionals
Status

CA 012 Civil Rights

Racial balance
Racial integration
Personnel characteristics by race
Racial discrimination
Historical development/trends
Classroom climate

CA 013 Education of the Disadvantaged

Educational personnel
    By type of disadvantage
Training and selection of personnel
Programs/innovations
Issues
Problems
Programs/personnel needs

CA 014 Vocational Education

Types of personnel
    By type of instructional area (agriculture, distributive education, etc.)
New programs/innovations
Issues
Problems
Educational level
Training
Planning
Supply and demand

CA 015 Bilingual Education

- Educational personnel
  - By type of minority group
- Programs/innovations
  - Training
  - Status
  - Educational level
  - General coverage

CA 016 Early Childhood Education

- Type of personnel
  - Programs/approaches (Head Start, etc.)
  - Educational level (nursery/kindergarten, etc.)
- Personnel needs (supply and demand)
- Program needs/costs
- Status
- Trends
- Training

CA 017 Educational Leadership

- Administration
  - Administrative personnel
    - School superintendents
    - Principals
    - Assistant principals
    - Department heads
  - Administrative qualifications
  - Administrative characteristics
  - Administrative background
  - Administrative leadership
  - Administrative attitudes
  - Administrative costs
- Decision-making patterns
- Evaluation
- Selection and retention
- Status

CA 018 Paraprofessionals

- By types of paraprofessionals
  - Career ladder concepts
  - Recruitment
  - Selection
  - Training
  - Sources
  - Status
  - Earnings
  - Role/duties
  - Utilization by educational level

CA 019

Environmental health teachers
Other environmental health personnel
By type of program
By educational level
Other educational programs
Natural science
Social science
Humanities and languages

CA 020 Pupil Personnel Services

Type of personnel
By educational service responsibility
By educational level
In new programs/innovations
Training
Status
Expansion of services

CA 021 Special Education

Educational personnel
By type of program
By educational level
Training
New programs/innovations
Utilization
Status

CA 022 Public and Teacher Attitude

By types of attitudes
By types of population
By types of educational personnel
By geographic area
By time period

CA 023 Teacher Associations/Unions

Membership
Negotiation issues
Negotiation activities
Teacher strikes
Work stoppages
Policies/Union activities
Leadership

CA 024 Legislation

Laws and regulations
- Affecting school personnel
- By type of personnel
- By type of program/area
- By educational level
- By geographic area
- New and proposed legislation

CA 025 Teacher Characteristics

General coverage
Types of educational personnel by:
- Educational preparation
- Experience
- Certification status
- Type of assignment
- Teaching load
- Marital status
- Age
- Sex
- Earnings

Trends

CA 026 Educational Technology

Programs
Educational personnel
- Television teachers

Computer-assisted instruction
Utilization
New developments

CA 027 Future Societal Needs/Trends

Trends
Educational planning
- By instructional field
- By level
- By type of program
- By type of target population

Conceptual developments
Educational issues

CA 028 Major Discipline Issues

Discipline
- Trends
- Practices
- Community attitudes
- School attitudes

Teacher behavior
Pupil behavior
Classroom control
Administ[illegible]

CA 029 Community Relations

Type of institutions/groups
Type of services rendered
Trends
Practices
Cooperation levels (between school - community)

CA 030 Innovation/Experimentation

Innovations
Experiments
Educational change
- Change agents
- Acceptance of change
- Issues in change
- Processes of change

VI. Appendices

Appendix 1

GUIDELINES FOR ABSTRACTORS

Choice of Materials for Inclusion Into the EYAP Catalog

1. The materials should include numerical data formats (tables, graphs, charts, etc.). The focus of our abstracts is primarily quantitative.

2. The materials which do not contain any of the above should at least have estimates which are incorporated in the text.

3. Materials which do not show any of the above but may also be included should show trends, new developments, future areas of interest, priorities, etc.

4. Most important, the quantitative and qualitative descriptors should concern educational personnel. Where pupil population or other subjects (schools, programs, training, salaries, etc.) are being abstracted, they should be related to educational manpower and this should clearly be indicated in the material. The educational manpower that we have identified in our project include the following:

   teachers, administrators and administrative personnel, supervisors and curriculum designers, new professionals, pupil personnel staffs such as guidance counselors, social workers, school psychologists, speech and hearing specialists, health workers, other personnel such as paraprofessionals, in preschool, elementary and secondary private and public school systems.

5. Choose materials that have national implications or that are nationwide in scope, or if they are smaller studies such as state or local studies, assure that they have sound methodology after checking size of sample, reliability or indicate whether based on expert opinion or other inputs.

6. The materials should be recent, the date of the data should be after 1962, unless some prior nationwide or significant ones have not been duplicated. These should be noted down for further verification to check whether they have been updated.

Appendix 2

ERAP SUBJECT INDEX SUMMARY

Number	Accession Number		Accession Number		Accession Number		Accession Number		Accession Number		Accession Number		Accession Number	
Number	Seq. No.	CA Number	Seq. No.	CA Number	Seq. No.	CA Number	Seq. No.	CA Number	Seq. No.	CA Number	Seq. No.	CA Number	Seq. No.	CA Number
		PERSONNEL GROUPS Guidance Counselors								CATEGORY AREAS Training, Preservice				

APPENDIX 3

Sample Page, ERIC Subject Index

← DESCRIPTORS →

Personnel Group / Category, Subject, Key wd	Character-istics	Educational Level	Geographic Area	Program Area	Instruc-tional Area	Type of Study	Date of Info	Title / Accession No.
T Teacher associations/unions Negotiation agreements Paid leave provisions		Elem/sec	N, S			Survey	1967-68	Paid Leave Provisions for Teachers Negotiation Agreements CA 003
T Teacher associations/unions Negotiation issues Teacher strikes Work stoppages		Elem/sec	N, S			Analysis of existing sources	1940 thru 1970	Teacher Strikes, Work Stoppages, An Interruptions of Service, 1965-70 CA 003
Guid C Pupil personnel staffs Guidance Counselors	Competence, functions, educational preparation	Elem	S (Ca)			Survey	1969	Elementary School Counselors in California CA 009
T (minority) Early childhood education Head Start programs	Attitudes towards child behavior	Pre S	S (Texas)			Survey	1969	Head Start Teachers' Ethnic Backg Understanding and Attitudes Toward Chil Behavior, Home Relationships CA 016
T Performance Teacher merit rating criteria Earnings, incentives & fringe benefits Merit pay			N			Analysis of existing sources	1965	Merit Rating for Salary Increases a Promotions CA 006
T Selection Policies			N			Analysis of existing sources	1963-64	Teacher Selection Policies and Procedures in Large Public School Systems in the United States CA 002
T Career Patterns Persistence			L (NY city)			Follow-up	1953 and 1964	Motivational Factors Influencing Persistence in Teaching as Revealed by Interviews CA 010

Appendix 4

MAJOR DATA COLLECTION SYSTEMS
To be analyzed
(Initial Listing)

I. USOE

A. ELSEGIS
B. Staffing Study - Forms x, y, z
C. Joint Federal/State Task Force on Evaluation
D. ERIC
E. Office of Planning and Evaluation
F. Voc Ed
G. Handicapped
H. Others

II. Census

III. Labor (BLS - Manpower Administration)

IV. NSF

V. Library of Congress

VI. Civil Rights (H.E.W. and Justice)

VII. Interior

VIII. Research Coordinating Units

IX. Department of Agriculture

X. DOD

XI. VA

XII. NEA

XIII. ACE

XIV. Association of Junior Colleges

XV. Various Research Labs

XVI. State

XVII. Local

XVIII. Universities

XIX. Professional Associations (Physicists, Chemists, Economists, etc.)

XX. General Literature Search

V. Bibliography

Bibliography

Sources of descriptors and terminologies for the development of the EMAP Subject Index and the general literature search:

1. Thesaurus of Education Terms, Case Western University, 1968.

2. Thesaurus of ERIC Descriptors, CCM Information Corporation, 1970.

3. OE Handbooks:

   Staff Accounting for Local and State School Systems, Lichtenberger and Penrod, State Educational Records Reports Series: Handbook IV, USOE - HEW, 1966.

   Standard Terminology for Curriculum and Instruction in Local and State School Systems, NCES, State Educational Records and Reports Series, Handbook VI, 1970.

   Vocational Education and Occupations, DVTE and US Manpower Administration, 1969.

4. Library classifications and General Research Indexes: Library of Congress, University Microfilms Index for university dissertations, National Education, Journal of Educational Research indexes, etc.

5. General sources: library and information systems handbooks/articles and educational literature:

   Buckland, The Recording of Library of Congress Bibliographic Data, 1968.

   Solmon, ed., Library Automation, A State of the Art Review, 1965.

   Cudra, Annual Review of Information Science and Technology, 1969.

   Everyman's Guide: An ERIC Search System for Social Studies Teachers, Consultants and Librarians.